

## REMARKS

Claims 2-19 and 21-37 are pending in the present application. In the above amendments, Claims 2, 3, 6, and 18-19 have been amended, Claims 1 and 20 have been canceled without prejudice, and new Claims 23-37 have been added. Applicants believe that the present application is now in condition for allowance, for which prompt and favorable action is respectfully requested.

No new matter is believed to have been introduced to the application by this amendment. The subject matter of new claims 23-37 is fully supported by the original specification and claims, including, for example, paragraphs [0101]-[0106], and originally filed claims 2-13, 18, and 19.

### *Claim Rejections – 35 USC § 102*

Claims 16, 18, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,804,219 (“Koo”). Reconsideration and withdrawal of this rejection is respectfully requested.

The claimed invention generally concerns time-scalable priority-based scheduling. With reference to the particular claim language, independent Claim 16 is directed to a method of scheduling. The method comprises receiving a rate request, transmitting a rate assignment responsive to the rate request, the rate assignment indicating a scheduled duration and a scheduled rate applicable for the scheduled duration, and receiving data for the scheduled duration at the scheduled rate.

Independent Claim 18 is directed to a station for scheduling data transmissions. The station comprises means for receiving a rate request, means for transmitting a rate assignment responsive to the rate request, the rate assignment indicating a scheduled duration and a

scheduled rate applicable for the scheduled duration, and means for receiving data for the scheduled duration at the scheduled rate.

Independent Claim 22 is directed to a computer-readable medium embodying a program of instructions executable by a processor to perform a method of scheduling data transmissions. The method comprises receiving a rate request and transmitting a rate assignment responsive to the rate request, the rate assignment indicating a scheduled duration and a scheduled rate applicable for the scheduled duration. The method further comprises receiving data for the scheduled duration at the scheduled rate.

The applied references are not understood to disclose or suggest the features of the claimed invention, particularly with respect to at least the features of a “rate assignment indicating a scheduled duration and a scheduled rate applicable for the scheduled duration,” as recited in pending independent claims, Claims 16-19 and 21-22, or “transmitting a rate request if . . . data in the buffer exceeds a buffer depth,” as recited in independent Claims 17, 19, and 21.

Turning to the applied references, Koo is seen to be generally directed to a data transmitting method in a CDMA system. *See* Koo, Abstract. Specifically, Koo discloses a “supplemental channel assignment message . . . contain[ing] information about the action time and duration of the [supplemental channel],” sent from a base station to a mobile station. Koo, col. 6, lines 33-37. The Examiner states this supplemental channel assignment message of Koo, as indicated by boxes 350 and 360 in FIG. 3 of Koo, “transmits at a high rate and for a certain period as determined by the SCH timer” and therefore anticipates Applicants’ “rate assignment indicating a scheduled duration and a scheduled rate applicable for the scheduled duration.” *See* Office Action, pages 2-3. Nowhere, however, is Koo seen to disclose or suggest “a rate assignment indicating . . . a scheduled rate applicable for [a] scheduled duration.” Even if Koo

were seen to transmit data at a high rate, no where does Koo disclose or suggest that the high rate of transmission has been indicated as a scheduled rate applicable for a scheduled duration.

Koo also discloses a “resource request message” received by a base station from a mobile station, and a “supplemental channel request message . . . includ[ing] required bandwidth and time-related information” transmitted back from the mobile station to the base station. Koo, col. 5, line 42, and col. 6, lines 25-28. Even if the supplemental channel request message of Koo were seen to disclose or suggest “a rate assignment indicating . . . a scheduled rate applicable for [a] scheduled duration,” Koo teaches away from the features of the claimed invention, because Koo teaches having different devices perform the limitations of Applicants’ claimed method, consequently, no one device could perform the elements of Applicants’ claimed method. In other words, the base station of Koo would be seen to be “receiving the rate request” while the mobile station would be seen to be transmitting “a rate assignment indicating . . . a scheduled rate applicable for [a] scheduled duration.” *Id.* In addition to not being seen to disclose or suggest a “rate assignment indicating a scheduled duration and a scheduled rate applicable for the scheduled duration,” Koo is also not seen to disclose or suggest “transmitting a rate request if . . . data in the buffer exceeds a buffer depth,” as recited in independent Claims 17, 19, and 21.

Accordingly, Koo is not understood to disclose, teach, or suggest the features of independent Claims 16, 18, and 22, which are believed to be in condition for allowance.

### ***Claim Rejections – 35 USC § 103***

Claims 1-3, 17, and 19-21 are rejected under 35 U.S.C. 103(a) as being obvious over Koo in view of U.S. Patent No. 5,390,165 (“Tuch”). Claims 4-15, were rejected under 35 U.S.C. 103(a) as being obvious over Koo in view of Tuch, and further in view of U.S. Patent No. 5,914,950 (“Tiedemann”). Reconsideration and withdrawal of these rejections are respectfully requested.

Without conceding the correctness of the rejection, Claims 1 and 20 have been cancelled without prejudice or disclaimer of the subject matter contained therein.

Independent Claim 17 is directed to a method of transmitting data. The method comprises transmitting a rate request if data arrives in a buffer, data in the buffer exceeds a buffer depth, and sufficient power exists to transmit at the rate requested. The method also comprises receiving a rate assignment responsive to the rate request, the rate assignment indicating a scheduled duration and a scheduled rate applicable for the scheduled duration. The method further comprises transmitting data, the transmitting responsive to the rate assignment, wherein the data is transmitted for the scheduled duration at the scheduled rate.

Independent Claim 19 is directed to a station for transmitting data. The station comprises means for transmitting a rate request if data arrives in a buffer, data in the buffer exceeds a buffer depth, and sufficient power exists to transmit at the rate requested. The station further comprises means for receiving a rate assignment responsive to the rate request, the rate assignment indicating a scheduled duration and a scheduled rate applicable for the scheduled duration, and means for transmitting data, the transmitting responsive to the rate assignment, wherein the data is transmitted for the scheduled duration at the scheduled rate.

Independent Claim 21 is directed to a computer-readable medium embodying a program of instructions executable by a processor to perform a method of transmitting data. The method comprises transmitting a rate request if data arrives in a buffer, data in the buffer exceeds a buffer depth, and sufficient power exists to transmit at the rate requested. The method also comprises receiving a rate assignment responsive to the rate request, the rate assignment indicating a scheduled duration and a scheduled rate applicable for the scheduled duration. The method further comprises transmitting data, the transmitting responsive to the rate assignment, wherein the data is transmitted for the scheduled duration at the scheduled rate.

Tuch is not seen to remedy the foregoing deficiencies of Koo. Tuch is seen to be generally directed to a method and apparatus for transmitting digital data packets on a wireless channel. *See* Tuch, Abstract. Specifically, Tuch discloses “[t]he packet energy needed [for a packet to reach the destination station] is calculated in the packet energy calculator, utilizing . . . the packet length  $dx$  derived from the packet length buffer.” Tuch, Col. 4, lines 37-47. Nowhere, however, is Tuch seen to disclose or suggest “transmitting a rate request if . . . data in the buffer exceeds a buffer depth.” Indeed, nowhere does Tuch disclose or suggest ever exceeding beyond a buffer depth, but instead, discloses calculating energy utilizing a packet stored within the buffer. *Id.* Moreover, as Tuch nowhere discloses or suggests transmitting a rate request if data in the buffer exceeds a buffer depth, it goes without saying that Tuch likewise does not disclose or suggest transmitting a rate request if both data in the buffer exceeds a buffer depth and sufficient power exists to transmit at the rate requested. Accordingly, whether alone or in combination with Koo, Tuch is not seen to disclose or suggest the features of the claimed invention, particularly with respect to at least the features of a “rate assignment indicating a scheduled duration and a scheduled rate applicable for the scheduled duration,” or “transmitting a rate request if . . . data in the buffer exceeds a buffer depth.”

Accordingly, the applied references, either alone or in combination, are not understood to disclose, teach, or suggest the features of independent Claims 17, 19, and 21, which are believed to be in condition for allowance.

### ***New Claims***

Independent Claim 34, as newly added, is directed to a base station for scheduling data transmissions. The base station comprises an antenna, a receiver configured to receive a rate request via the antenna, and a controller configured to determine a rate assignment responsive to the rate request, the rate assignment indicating a scheduled duration and a scheduled rate

applicable for the scheduled duration. The base station further comprises a transmitter configured to transmit the rate assignment. The receiver is further configured to receive data for the scheduled duration at the scheduled rate.

Independent Claim 35, as newly added, is directed to a mobile station for transmitting data. The mobile station comprises a controller configured to generate a rate request if data arrives in a buffer, data in the buffer exceeds a buffer depth, and sufficient power exists to transmit at the rate requested. The mobile station further comprises an antenna, a transmitter configured to transmit the rate request via the antenna, and a receiver configured to receive a rate assignment responsive to the rate request, the rate assignment indicating a scheduled duration and a scheduled rate applicable for the scheduled duration. The transmitter is further configured to transmit data, the transmitted data responsive to the rate assignment, wherein the data is transmitted for the scheduled duration at the scheduled rate.

Independent Claim 36, as newly added, is directed to an apparatus for scheduling data transmissions. The apparatus comprises a receiver configured to receive a rate request and a controller configured to determine a rate assignment responsive to the rate request, the rate assignment indicating a scheduled duration and a scheduled rate applicable for the scheduled duration. The apparatus further comprises a transmitter configured to transmit the rate assignment. The receiver is further configured to receive data for the scheduled duration at the scheduled rate.

Independent Claim 37, as newly added, is directed to an apparatus for transmitting data. The apparatus comprises a controller configured to generate a rate request if data arrives in a buffer, data in the buffer exceeds a buffer depth, and sufficient power exists to transmit at the rate requested. The apparatus further comprises a transmitter configured to transmit the rate request, and a receiver configured to receive a rate assignment responsive to the rate request, the

rate assignment indicating a scheduled duration and a scheduled rate applicable for the scheduled duration. The transmitter is further configured to transmit data, the transmitted data responsive to the rate assignment, wherein the data is transmitted for the scheduled duration at the scheduled rate.

As discussed above, the applied references, whether alone or in combination, are not understood to disclose or suggest the features of the claimed invention, particularly with respect to at least the feature of a “rate assignment indicating a scheduled duration and a scheduled rate applicable for the scheduled duration,” as recited in new independent Claims 34-37. Accordingly, Claims 34-37 are believed to be in condition for allowance.

The other claims in the application are dependent from the independent claims discussed above and therefore are believed to be allowable over the applied references for at least the same reasons. Because each dependent claim is deemed to define an additional aspect of the invention, the individual consideration of each on its own merits is respectfully requested.

**CONCLUSION**

In light of the amendments contained herein, Applicants submit that the application is in condition for allowance, for which early action is requested.

Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Respectfully submitted,

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